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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,428	12/14/2001	Scott Swix	01042 (BLL0578US)	6351

36192 7590 05/26/2009

AT&T Legal Department - CC
Attn: Patent Docketing
Room 2A-207
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Bedminster, NJ 07921

EXAMINER	
SHEPARD, JUSTIN E	

ART UNIT	PAPER NUMBER
2424	

MAIL DATE	DELIVERY MODE
05/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/017,428	SWIX ET AL.	
	Examiner	Art Unit	
	Justin E. Shepard	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Appeal Brief, filed 2/9/09, with respect to the rejection(s) of claim(s) 1-4 and 11 under 103(a) in view of Goodman and Hylton have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Goodman in view of Hylton in view of Parry.

On page 5 of the Appeal Brief, the appellant argues that Goodman does not contain a system bus, network bus, and a media bus. Specifically that the system bus is used to **transmit the entire transport layer**. Goodman does contain all 3 buses, but does not teach that the transport layer is transported over the system bus.

As seen in the appellant's figure 7, the media bus (part 610) is used to connect the user terminal to the display device (i.e. a television) using video cables (appellant's specification: page 25, lines 18-20). Goodman teaches a user terminal with multiple video out capabilities that can be used to attach the user terminal to the display (figure 8, parts 837 and 839; column 18, lines 5-15).

The network bus (appellant's figure 7, part 615) is used to connect the gateway device to the user terminal using a network cable for example (appellant's specification: page 26, line 27). Goodman (figure 2, connection between boxes 201 and 202; figure 9, part 909) teaches that video packets are transmitted from NIM module (figure 2, part 201) to the DET (figure 2, part 202) over a network bus (column 16, lines 53-60; figure 9, part 909; figure 8, part 827).

The system bus (appellant's figure 7, part 620) is used to transport all of the video data in the gateway device. As can be seen in figure 7, the tuners (part 120) tune to the video data and transmit the entire transport layer to the Broadband I/O (part 735) for eventual transmission to the network bus (part 615) over the system bus (part 620). Goodman teaches a system bus in the gateway device (the NIM, figure 2, part 201 in this case) that is used for controlling the device using a processor (figure 9, connections emanating from NIM controller 910). However, the system bus does not transmit the tuned entire transport layer as is required in the claims (claim 1, lines 2-6) to a network bus for eventual transmission to a client device as there are connections between the different sub-systems that would allow for the processor to be bypassed. Parry (US Patent Number 6,378,035) teaches wherein the system bus can be used to connect a tuner and a network bus (figure 1, parts 23, 51, 53, and 62; column 5, lines 10-15). As will be shown in the updated rejection, it would be a simple substitution to allow for the architecture of the computing device taught by Parry (figure 1) to be applied to the computing device (NIM) taught by Goodman (figure 9).

Page 6, argument B:

The appellant argues that it would not be obvious to add the decryption module taught by Hylton to the DET (Goodman: figure 2, part 202) as the NIM that is used to transmit the video data to the DET already has a decryption unit (figure 9, part 907). It is the opinion of the examiner that one could use the Decryption Access Control Processor (figure 9, part 907) to decrypt the data from the cable headend (such as

Comcast) and add another layer of encryption, which would require a decryption device at the user terminal to stop a packet sniffing device from getting and pirating the digital signals from the device. The reason to do this is to ensure that the pure digital signals being streamed over the cable cannot be pirated and then placed on the internet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton (US Patent Number 5,708,961) in view of Parry.

Referring to claim 1, Goodman discloses a digital residential entertainment system (figure 2), comprising:

a media server tuning to a transport layer and transmitting the entire transport layer, rather than a single program stream, over a bus (figure 2, part 200; figure 9, part 903; column 19, lines 22-28; column 15, lines 1-7; column 13, lines 42-46) , the transport layer including multiple programs, data and information streams (column 14, lines 30-35; column 19, lines 39-46);

a broadband input/output module receiving the transport layer from a bus and sending the transport layer to a network bus (figure 7; figure 9, part 909);

a network input/output module receiving the transport layer from the network bus (figure 7; figure 8, part 827);

a demultiplexer that receives the transport layer and that demultiplexes the transport layer (figure 8, part 827); and

a decoder that decodes the demultiplexed and decrypted transport layer (figure 8, part 829); and

a media bus providing a decoded transport layer from the decoder to a display device (figure 7, line between DET and 701).

Goodman does not disclose a system wherein the receiver contains a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer; and

wherein the data is transmitted from the tuning system to the network bus using a system bus.

In an analogous art, Hylton teaches a system wherein the receiver contains a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer (figure 1, part 101; column 19, lines 1-2).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the decryption module to the receiver as taught by Hylton to the system disclosed by Goodman. The motivation would have been that by adding an additional level of encryption between the NIM and DET would stop user's from pirating the digital signal being pirated and being placed on the internet and that people would be stopped from receiving paid content for free.

Goodman and Hylton do not disclose a system wherein the data is transmitted from the tuning system to the network bus using a system bus.

In an analogous art, Parry teaches a system wherein the data is transmitted from the tuning system to the network bus using a system bus (figure 1, parts 23, 51, 53, and 62; column 5, lines 10-15).

At the time of the invention, it would have been obvious for one of ordinary skill in the art to substitute the system bus architecture taught by Parry with the system bus architecture taught by Goodman. The motivation would have been to enable the system to be modular allowing components to be added as all communication in the system would occur over the system bus.

Referring to claim 2, Goodman discloses a digital residential entertainment system of claim 1, further comprising a digital-to-analog converter that converts the decoded transport layer to analog signals (figure 8, parts 837 and 839).

Referring to claim 3, Goodman discloses a digital residential entertainment system of claim 1, further comprising a conditional access system that restricts access to media services offered via the transport layer to authorized customers (column 19, lines 39-46), and wherein the decoder is connected to a media bus and the decoder sends the decoded, multiplexed, and decrypted transport layer to the media bus (figure 8, line connecting parts 829 and 835).

Referring to claim 4, Goodman discloses a digital residential entertainment system of claim 3, wherein the transport layer includes multiple program signals (column 4, lines 19-30).

Goodman does not disclose a digital residential entertainment system of claim 3, wherein the conditional access system comprises a card reader and an access card.

In an analogous art, Hylton teaches a digital residential entertainment system of claim 3, wherein the conditional access system comprises a card reader and an access card (figure 1, part 101; column 19, lines 1-2 and 6-10).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the decryption card to the receiver as taught by Hylton to the system disclosed by Goodman. The motivation would have been to allow for future upgrades the encryption to be performed by the user, saving in upgrade costs while keeping current with the current encryption techniques.

Referring to claim 11, Goodman, Hylton and Parry do not disclose a digital residential entertainment system of claim 1, wherein the network input/output module, the decryption module, the demultiplexer and the decoder comprise a computer-readable medium comprising computer-readable instructions, which when executed perform the functions of the network input/output module, the decryption module, the demultiplexer and the decoder.

The examiner takes Official Notice that it is notoriously well known in the art to use software run on a processor replace functions performed by individual ASICs.

At the time of the invention it would have been obvious for one of ordinary skill in the art to use software running on a processor to replace the ASICs disclosed by Goodman and Hylton. The motivation would have been that using an off the shelf processor is a cheaper alternative to using ASICs.

2. Claims 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton in view of Florin in view of Parry.

Referring to claim 12, Goodman discloses digital residential entertainment system, comprising:

a tuner receiving and demodulating a plurality of transport layers, tuning to a specific transport layer identified by a decoder and sending the entire identified transport layer, rather than a single program stream, over a bus (figure 2, part 200; figure 9, part 903; column 19, lines 22-28; column 15, lines 1-7; column 13, lines 42-46), the transport layer including multiple programs, data and information streams (column 14, lines 30-35; column 19, lines 39-46);

a broadband input/output module receiving the transport layer from a bus and sending the transport layer to a network bus (figure 7; figure 9, part 909);

a network input/output module connected to the network bus and retrieving the transport layer from the network bus (figure 7, line connecting part 201 and 702; figure 8, part 827);

a demultiplexer that receives the decrypted transport layer and that demultiplexes the transport layer (figure 8, part 827); and

another decoder connected to the demultiplexer that decodes the demultiplexed and decrypted transport layer (figure 8, parts 827 and 829); and

a media bus providing a decoded transport layer from the decoder to a display device (figure 7, line between DET and 701).

Goodman does not disclose a system that contains an array of tuners and a broadband input/output module connected to a system bus; and a decryption module connected to the network input/output module and the demultiplexer that receives the transport layer from the network input/output module and that decrypts the transport layer; and

wherein the data is transmitted from the tuning system to the network bus using a system bus.

In an analogous art, Hylton teaches a system that contains an array of tuners (figure 7, parts 11-14); and a decryption module connected to the network input/output module and the demultiplexer that receives the transport layer from the network input/output module and that decrypts the transport layer (figure 1, part 101; column 19, lines 1-2; figure 7).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the array of tuners and the added level of encryption between the NIM and the DET as taught by Hylton to the system disclosed by Goodman.

The motivation for adding the array of tuners would have been to enable the system to choose from more than one transport layer, thereby adding more viewing options for the user and making the system more enticing.

The motivation for adding the additional encryption level would have been that by adding an additional level of encryption between the NIM and DET would stop user's from pirating the digital signal being pirated and being placed on the internet and that people would be stopped from receiving paid content for free.

Goodman and Hylton do not disclose a system wherein the tuner and broadband input/output modules are connected by a system bus; and

wherein the data is transmitted from the tuning system to the network bus using a system bus.

In an analogous art, Florin teaches a system wherein the tuner and broadband input/output modules are connected by a system bus (figure 2).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the system bus taught by Florin to the system disclosed by Goodman and Hylton. The motivation would have been to enable the system to use an off the shelf general purpose controller to save on developmental costs.

Goodman, Hylton, and Florin do not disclose a system wherein the data is transmitted from the tuning system to the network bus using a system bus.

In an analogous art, Parry teaches a system wherein the data is transmitted from the tuning system to the network bus using a system bus (figure 1, parts 23, 51, 53, and 62; column 5, lines 10-15).

At the time of the invention, it would have been obvious for one of ordinary skill in the art to substitute the system bus architecture taught by Parry with the system bus architecture taught by Goodman. The motivation would have been to enable the

system to be modular allowing components to be added as all communication in the system would occur over the system bus.

Referring to claim 14, Goodman discloses a digital residential entertainment system of claim 12, further comprising a digital-to-analog converter that converts the transport layer to analog signals (figure 8, parts 837 and 839), and wherein the digital-to-analog converter is connected to a media bus and the digital-to-analog converter sends the decoded, multiplexed, and decrypted transport layer to the media bus (figure 8).

Referring to claim 15, Goodman discloses a digital residential entertainment system of claim 12, further comprising a conditional access system connected to the another decoder that restricts access to media services offered via the transport layer to authorized customers (column 19, lines 39-46; figure 8).

3. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman, Hylton, and Parry as applied to the claims above, and further in view of Rajakarunanajake.

Referring to claim 5, Goodman discloses a digital residential entertainment system of claim 3, further comprising an Ethernet switch connected to the network bus and that receives the transport layer from the network bus (figure 6, part 201).

Goodman, Hylton, and Parry do not disclose a digital residential entertainment system of claim 3, wherein the conditional access system comprises a secured network conditional access system.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 3, wherein the conditional access system comprises a secured network conditional access system (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the IPsec connection taught by Rajakarunanajake to the system disclosed by Goodman, Hylton, and Parry. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 6, Goodman, Hylton, and Parry do not disclose a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a secured Internet Protocol (IP) connection to an authentication service provider.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a secured Internet Protocol (IP) connection to an authentication service provider (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the IPsec connection taught by Rajakarunanajake to the system

disclosed by Goodman, Hylton, and Parry. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 7, Goodman, Hylton, and Parry do not disclose a digital residential entertainment system of claim 6, wherein the secured Internet Protocol (IP) connection is an IPsec connection.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 6, wherein the secured Internet Protocol (IP) connection is an IPsec connection (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the IPsec connection taught by Rajakarunanajake to the system disclosed by Goodman, Hylton, and Parry. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 8, Goodman does not disclose a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a broadband connection to an authentication service provider.

In an analogous art, Hylton teaches a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a broadband connection to an authentication service provider (column 40, lines 13-17).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the VPC connection taught by Hylton to the system disclosed by Goodman. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 9, Goodman does not disclose a digital residential entertainment system of claim 8, wherein the broadband connection is a private virtual circuit (PVC) connection.

In an analogous art, Hylton teaches a digital residential entertainment system of claim 8, wherein the broadband connection is a private virtual circuit (PVC) connection (column 40, lines 13-17).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the VPC connection taught by Hylton to the system disclosed by Goodman. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman, Hylton, Florin, and Parry as applied to claim 12 above, and further in view of Rajakarunajake.

Referring to claim 16, Goodman, Hylton, Florin, and Parry do not disclose a digital residential entertainment system of claim 12, wherein the transport layer is an Ethernet transport layer.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 12, wherein the transport layer is an Ethernet transport layer (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the Ethernet transport layer taught by Rajakarunanajake to the system disclosed by Goodman, Hylton, Florin, and Parry. The motivation would have been that transmitting data with Ethernet cable is a cheap way to transmit data on a network.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman, Hylton, and Parry as applied to claim 1 above, and further in view of D'Luna.

Referring to claim 10, depending on claim 1, Goodman, Hylton, and Parry fail to teach the decrypting, demultiplexing and decoding functions are integrated into a single chip.

In an analogous art D'Luna teaches the decrypting, demultiplexing and decoding functions are integrated into a single chip (figure 2, part 106; paragraph 91, lines 1-2).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Goodman, Hylton, and Parry using the integrated signal chip of D'Luna for the purpose of making the set top box more compact or smaller.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman, Hylton, Florin and Parry as applied to claim 12 above, and further in view of Lorenz.

Referring to claim 13, Goodman, Hylton, Florin, and Parry do not disclose a digital residential entertainment system of claim 12, wherein the decoder is part of a thin client set top box.

In an analogous art, Lorenz teaches a digital residential entertainment system of claim 12, wherein the decoder is part of a thin client set top box (paragraph 96).

At the time of the invention it would have been obvious for one of ordinary skill in the art to use the thin client STB taught by Lorenz in the system disclosed by Goodman, Hylton, Florin, and Parry. The motivation would have been to enable the cheaper hardware to be included in the user's receiver and install the more expensive hardware in the single server.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin E. Shepard whose telephone number is (571) 272-5967. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Kelley/
Supervisory Patent Examiner, Art Unit 2424

JS